WHAT IS CLAIMED IS:

1   1.   A storage subsystem, comprising:
2   a controller having a plurality of ports;
3   a plurality of storage devices configured store information;
4   a lock table including attribute information and retention information for each
5   of a plurality of storage volumes presented to a host device, the plurality of storage volumes
6   including a non-virtual volume that maps to a first storage device of the storage subsystem
7   and a virtual volume that maps to a second storage device of an associated storage subsystem,
8   the associated subsystem being linked to the storage subsystem via a communication link,
9   wherein the controller is configured to receive and process a request from a
10   host to modify an attribute of the virtual volume.

1   2.   The storage subsystem of claim 1, wherein the lock table includes a
2   permission field and a retention period field.

1   3.   The storage system of claim 1, wherein the controller includes a locker
2   module that process the request from the host to modify the virtual volume that is located in
3   the associated subsystem.

1   4.   The storage system of claim 3, wherein the locker module sends a
2   request to modify the attribute of the virtual volume to a locker module of the associated
3   subsystem.

1   5.   A method for managing a storage system, comprising:
2   presenting a plurality of storage volumes to a host via a first storage
3   subsystem, the plurality of storage volumes including a non-virtual volume that maps to a
4   storage area within the first storage subsystem and a virtual volume that maps to a storage
5   area within a second storage subsystem that is different from the first subsystem;
6   receiving at the first subsystem a first request from a host to modify an
7   attribute of a target storage volume, the target storage volume being one of the plurality of
8   storage volumes presented to the host; and
9   sending a second request from the first subsystem to the second subsystem if
10   the target volume is determined to be the virtual volume, the second request being a request
11   to modify the attribute of the target volume.

1   6.   The method of claim 5, further comprising:

2   modifying the attribute of the target volume by a controller of the second

3 subsystem according to the second request.

1   7.   The method of claim 6, further comprising:

2   sending a first report of the attribute modification from the second subsystem

3 to the first subsystem; and

4   sending a second report of the attribute modification from the first subsystem

5 to the host.

1   8.   The method of claim 5, further comprising:

2   modifying the attribute of the target volume by a controller of the first

3 subsystem if the target volume is the non-virtual volume.

1   9.   The method of claim 8, wherein the first subsystem includes a first

2 locker module to process the first request from the host, and the second subsystem includes a

3 second locker module to process the second request from the first subsystem.

1   10.   The method of claim 5, wherein the first request is a request to lock the

2 target volume to grant only read access to the target volume.

1   11.   The method of claim 10, wherein the second request is a request to

2 lock the target volume to grant only read access to the target volume.

1   12.   The method of claim 10, wherein a lock table associated with the target

2 volume is updated once the attribute of the target volume has been modified.

1   13.   The method of claim 12, wherein the lock table includes an attribute

2 field and a retention period field.

1   14.   The method of claim 13, wherein the attribute of the target volume

2 cannot be modified if a retention period associated with the retention field for the target

3 volume is not expired.

1   15.   The method of claim 5, wherein the first and second subsystems are

2 disk array units.

1   16.   A computer readable medium including a computer program for

2   managing a storage subsystem, the computer program comprising:

3   code for presenting a plurality of storage volumes to a host via a first storage

4   subsystem, the plurality of storage volumes including a non-virtual volume that maps to a

5   storage area within the first storage subsystem and a virtual volume that maps to a storage

6   area within a second storage subsystem that is different from the first subsystem;

7   code for receiving at the first subsystem a first request from a host to modify

8   an attribute of a target storage volume, the target storage volume being one of the plurality of

9   storage volumes presented to the host; and

10   code for sending a second request from the first subsystem to the second

11 subsystem if the target volume is determined to be the virtual volume, the second request

12 being a request to modify the attribute of the target volume.

1   17.   The computer program of claim 16, wherein the computer readable

2   medium is provided in a storage subsystem.